A. Claim 1

Claim 1 recites that the particulate matter combustion catalyst includes an NO oxidation catalyst comprising a catalyst component of platinum, gold and mixtures thereof carried on an acidic first carrier, and an NO_2 decomposition catalyst that comprises a catalyst component of a transition metal selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum carried on a second carrier selected from the group consisting of titania, zirconia, titania-zirconia, alumina, and mixtures thereof.

In the Office Action, it was alleged that the first powder of EP 966 corresponds to the NO_2 decomposition catalyst, while the second powder of EP 966 corresponds to the NO oxidation catalyst. However, even if this characterization of the first and second powders in EP 966 were accepted as accurate, EP 966 fails to teach or suggest the particulate matter combustion catalyst of claim 1.

Specifically, in claim 1, the NO_2 decomposition catalyst comprises a catalyst component of transition metals selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum carried on a second carrier selected from the group consisting of titania, zirconia, titania-zirconia, alumina, and mixtures thereof. The first powder of EP 966, on the other hand, is described to be comprised of rhodium supported on a porous particle. See the Abstract. EP 966 does not teach or suggest the inclusion of a transition metal selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum in the first powder.

Moreover, it would not have been obvious to one of ordinary skill in the art to have replaced the rhodium component required in the first powder of EP 966 with a transition metal selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum. In EP 966, rhodium is an essential

component of the catalyst as rhodium prevents particle growth and prevents the reduction of the oxidizing performance of platinum. By contrast, in the catalyst of claim 1, the transition metals are used for decomposing NO_2. A noble metal such as rhodium has high oxidation capability and is not preferred as an NO_2 decomposition catalyst. In view of these fundamental property and performance differences between rhodium and transition metals selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum, one of ordinary skill in the art would not have found it obvious to have replaced the required rhodium component in the first powder of EP 966 with a transition metal selected from the group consisting of iron, manganese, cobalt, copper, nickel, vanadium, yttrium, zinc, niobium and molybdenum.

For the foregoing reasons, Applicants respectfully submit that contrary to the allegations of the Patent Office, the first powder of EP 966 does not teach or suggest the NO_2 decomposition catalyst of the particulate matter combustion catalyst recited in claim 1. Accordingly, reconsideration and withdrawal of this aspect of the rejection are respectfully requested.

B. Claim 2

Claim 2 recites a particulate matter combustion catalyst comprising an NO oxidation catalyst and an NO_2 decomposition catalyst, wherein the NO oxidation catalyst comprises a catalyst component selected from platinum, gold and mixtures thereof carried on an acidic first carrier, while the NO_2 decomposition catalyst comprises at least one metal selected from among alkali metals and alkaline earth metals, and a catalyst component selected from among platinum, gold, ruthenium, rhodium, iridium, palladium and mixtures thereof, carried on a second carrier.

The Patent Office here again alleged that the first powder described in EP 966 would correspond to the NO_2 decomposition catalyst recited in claim 2. Applicants respectfully disagree.

EP 966 describes that the first powder is comprised of rhodium on a porous particle support. While the NO_2 decomposition catalyst of claim 2 is recited to include a catalyst component that may be rhodium carried upon a second carrier, it is also recited that the NO_2 decomposition catalyst must further include at least one metal selected from among alkali metals and alkaline earth metals. EP 966 fails to teach or suggest that the first powder must include an alkali metal and/or alkaline earth metal along with the rhodium. The first powder of the catalyst described in EP 966 thus clearly fails to teach or suggest the NO_2 decomposition catalyst of the particulate matter combustion catalyst recited in claim 2.

EP 966 does describe that the second powder of the catalyst may include nitrogen oxide adsorbing materials that include alkali metals and alkaline earth metals. See the Abstract and page 8, lines 25-29 of EP 966. However, nothing in EP 966 teaches or suggests that the nitrogen oxide adsorbing materials may be removed from the second powder for inclusion on the first powder. To the contrary, EP 966 specifically teaches that it is necessary to separate the rhodium component from the platinum and nitrogen oxide adsorbing components in order to avoid reduction of the oxidizing performance of platinum. EP 966 thus teaches away from inclusion of an alkali metal and/or alkaline earth metal upon the first powder.

For the foregoing reasons, Applicants respectfully submit that contrary to the allegations of the Patent Office, the first powder of EP 966 does not teach or suggest the NO_2 decomposition catalyst of the particulate matter combustion catalyst recited in claim 2. Accordingly, reconsideration and withdrawal of this aspect of the rejection are also respectfully requested.

C. **Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, 7, 8, 15 and 16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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